Registered at the G.P.O., Sydney, for Transmission by Post as a Newspaper. Published Weekly.

THE

MEDICAL JOURNAL OF AUSTRALIA

(With which "The Australasian Medical Gazette," and "The Australian Medical Journal" are incorporated.)

The Journal of the Australian Branches of the British Medical Association.

VOL. II.—4TH YEAR—NO. 26. SYDNEY: SATURDAY, DECEMBER 29, 1917. PRICE 6D.

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Fig. 1.

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LITERATURE ON REQUEST.

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THE MEDICAL JOURNAL OF AUSTRALIA.

VOL. II.—4TH YEAR. SYDNEY: SATURDAY, DECEMBER 29, 1917. No. 26.

NOTES ON THE USE OF THE GIANT MAGNET.[1]

By **J. Lockhart Gibson, M.D. (Edin.),**
Honorary Ophthalmic Surgeon, Brisbane Hospital for Sick Children.

Although the number of cases where help had been given to me and to my patients by the giant magnet was not great, my possession of one for some years before the war had impressed me with its usefulness. I made a point, therefore, of adding a "Haab magnet" to my equipment for the 3rd Australian General Hospital. The fact that the Queensland Red Cross had generously sent money to London ear-marked for the equipment of my department made it possible to do this, amongst other things.

Between my own civil cases and those I had at Lemnos, I have gathered some knowledge regarding its usefulness and its limitations. The two cases shown at the commencement of the meeting before last are the immediate cause of these notes.

My own magnet came from Hamburg, and is wound to take a 220 volt current, *i.e.*, the main current we have in Brisbane. With the 3rd Australian General Hospital I had to content myself with a magnet wound to 100 volt, bebecause the engine Major Herschell Harris was securing for working his X-ray plant was of that power, and it had to serve my giant magnet as well. We had to satisfy the War Office authorities that the engine and my magnet were necessary before their transport could be arranged for. I learnt at Lemnos, and also from my own more powerful magnet in Brisbane, that the more powerful one has advantages which are valuable.

The fact that there is still some scepticism regarding the advantages of the giant magnet, even in warfare, makes it more worth while to add my testimony in its favour to that which has accumulated during the war. As far as I could gather, the 3rd Australian General Hospital was the only general hospital in the Mediterranean or Egypt containing one in its equipment, which speaks volumes for the absence of complete appreciation of its worth.

After the 3rd Australian General Hospital became established in Lemnos, orders were sent out from British Mediterranean Headquarters that all soldiers with injured eyes were to be sent to us from Gallipoli, instead of on to Alexandria, if there was any hope of saving the eye. Many patients, however, who came in the hospital ships to Mudros Bay were taken directly onwards to Alexandria, without my seeing them, because of the failure to get transport to the shore. The further four days to Alexandria must often have made all the difference between the saving and the losing of an eye.

When the 3rd Australian General Hospital moved from Lemnos to Egypt, although we became then a hospital for Australian soldiers only, it was arranged that any British soldiers whose eyes containing magnetic foreign bodies, should be sent to us at Abbassia, in order that advantage of our giant magnet might be taken; but there was comparatively little fighting during those months, and no cases required it.

To-night I shall merely give a few cases to illustrate how the magnet works in removing bodies from different parts of the eye, to emphasize its advantages over a hand-magnet.

We have to remember that when a large piece of metal has penetrated far into an eye there is little hope of saving it. It is the rescue of small pieces of steel, therefore, that is of such great importance. It has been found that eyes from which pieces of steel heavier than 3.5 milligrammes have been removed are less likely to regain or retain useful sight than those from which smaller pieces have been removed. The disadvantage of the hand-magnet is that, with small foreign bodies, its power of attracting them is not great enough at any distance from the magnet's point. The point has not only to be approached very near to the foreign body, but a thick point has to be chosen, and often has to be introduced into the eye. The giant magnet not only draws the foreign body, even when small, from the back of the vitreous chamber, round the lens, through the pupil into the anterior chamber, but it also can be used for bringing the foreign body out of the anterior chamber, through an incision in the cornea. From the vitreous chamber it can be drawn also through a wound, or through an incision in the sclerotic, without any part of the magnet having been made to enter the eye.

For the use of the giant magnet, it is hardly necessary to localize the fragment of steel.

Although I have two large lamps in my circuit, to act as a rheostat, I have practically cut them out of the circuit when using the magnet for small foreign bodies. I find it better to have the whole strength of the 220 volt magnet (said to be able to lift 600 lbs.). This practice I learnt from the magnet's effect upon a small piece of steel in the lens of a young man. With the resistance in the circuit it did not come forward, but when the whole strength of the magnet was used it could be seen to respond at once and to come into the anterior chamber, from which it was removed, after incising the cornea and bringing the corneal wound up against the magnet. The cataractous lens dissolved.

The two cases I showed last evening illustrated much of what I want to say.

In the case of G.P., aged 36, a small piece of steel, weighing 3.32 milligrammes, had been in the vitreous for 10 days. It had entered by a small wound in the cornea, near the limbus, passed through the iris immediately behind this, and reached about half way back in the vitreous chamber. I did not see him until the eighth day. The small hole in the iris was then closed by exudation, and could not be recognized. It

[1] Read at a meeting of the Queensland Branch of the British Medical Association on November 2, 1917.

was clearly visible after the foreign body had been removed and the eye had settled down. I obtained hardly any red reflection through the pupil until after it was dilated, when sight improved from less than $^6/_{60}$ to part of $^6/_{36}$. It was then possible to detect a cloud of opacity travelling backwards in the vitreous behind the healed wound, and to detect blood also in the lower part of the vitreous. Dr. Love confirmed the diagnosis of a foreign body in the vitreous by an X-ray photograph, which I have already shown. I placed him before the magnet, with its pole in contact with the centre of the cocainized cornea. The current is switched on and off by means of a pedal. It drew the foreign body through the suspensory ligament and through the well-dilated pupil to the posterior surface of the cornea, where it hung until the current was disconnected. It then fell into the inferior angle of the anterior chamber and obtruded itself so little there that it could easily have escaped detection, had it not been already seen.

An incision parallel to the limbus in the lower outer quadrant and well outside the limits of a medium pupil was made by transfixing with a Graefe's knife: not a valvular incision therefore. This incision was then brought into contact with the sterilized point of the magnet, and the little piece of steel was drawn away from the firm grasp of the iris and cornea at the extreme angle of the anterior chamber, and into and out of the wound, to be found adhering firmly to the magnet's point. In the case of a small foreign body such as this, the method adopted for the last part of the extraction appears to cause least interference with the eye, and therefore least danger. It is, I think, better than the more usual method of using a hand magnet for the extraction of a small piece of steel from the anterior chamber, and I say this after personal experience of using the hand magnet for this purpose. Failing the giant magnet, the hand magnet is, of course, most useful for this last purpose, and for larger bodies it has distinct advantages. This man's eye regained a vision of $^6/_6$ partly. His other eye possessed uncorrected vision of $^6/_{24}$ only, so the injured eye must have been the better eye before the injury. Some opacity will persist in the vitreous, but the lens has escaped.

From the second patient, E.T., aged 17 years, a very similar and somewhat larger foreign body, 4.36 milligrammes, was removed from the anterior chamber a few days after the one just described. It had been there for 12 days. The history and progress of the case are instructive, if only to prove how untrustworthy a history may be. He was driving a 1.9 cm. ($\frac{3}{4}$ inch) tack into the heel of a boot when, he said, the tack rebounded, hit him on the eye, and then dropped on the floor. When I saw him next day, there was a wound in the outer part of the cornea, marked injection of the eye, and a considerable hypopion in the anterior chamber. From the account given me by the patient I did not suspect that the hypopion contained a foreign body. Under treatment the hypopion cleared up, but a small, yellow, seed-like portion remained in the lower angle of the anterior chamber. The eye, after losing its injection, became injected again, and varied from day to day.

Dr. Love took an X-ray picture, which proved that the apparent remains of a hypopion contained a foreign body. This was extracted from the anterior chamber by the giant magnet, exactly as in the last case. The eye regained vision of $^6/_6$ partly. The incision had, of course, to be larger than the foreign body; but it is difficult to see it when healed.

Another striking illustration of the misleading character of a history in the matter of injuries to eyes occured to me some years ago. A boy was brought to me, and declared that, while he was striking a piece of steel with a steel hammer, his eye was injured. A foreign body had got behind the ciliary region. The magnet had no attraction for it. The eye, when removed, yielded a piece of brass.

The following four cases of those seen at Lemnos will illustrate other points regarding the magnet. A large, scale-like fragment of steel had penetrated the sclerotic and other coats of the eye, and its shimmer could apparently be detected in the depths of the wound. A hand magnet could have been sufficient to extract it, had the wound been enlarged. I decided that the "Haab" would be safer, and removed the fragment through the wound, and without enlarging it, though it required all the magnet's force. The wound healed slowly, but the eye saw $^6/_6$, and was practically an undamaged eye.

In another patient a small fragment of steel had penetrated the cornea and iris, and was visible under the iris. I believe that a 220 volt magnet would have succeeded in disentangling it and bringing it into the pupil, and so into the anterior chamber, but the 100 volt magnet failed to do this, and I had to do a little iridectomy and pick the piece of steel out of the eye.

An officer had several wounds of his hands and legs, all with pieces of metal which proved to be steel. A piece, probably steel also, had entered his sclerotic behind the ciliary region, in the inner side of the eye, passed through the vitreous and located itself either in the sclerotic or just outside it. The posterior wound could be plainly seen, in spite of some blood in the vitreous, about 2 dises' diameters above and to the inner side (fortunately) of the disc. It was impossible to be sure whether the foreign body was within the globe, in the sclerotic, or just outside the sclerotic. Major Herschell Harris's X-ray photograph located it close to the posterior wound in the sclerotic, but could not make us more certain of its whereabouts than I have said. The entrance wound in the sclerotic was re-opened with a Graefe's knife, and the eye approached close to the sterilized Haab's magnet, but without delivering the foreign body or eliciting any dragging feeling in the eye. It was decided, therefore, to interfere no further, and to hope that the foreign body had got outside the coats of the eye. The eye regained $^6/_{12}$ of vision, and became quite comfortable.

A dried, pea-sized foreign body was located for me by Major Harris, well back under the upper wall of the orbit. It had entered through a wound in the brow. The lid was everted, and the eye approached to the magnet. A piece of steel was drawn forward and through the conjunctiva, without any incision; some pain was caused. The eye was not approached nearer than 2.5 cm. (1 inch) to the magnet, and the

foreiegn body jumped the space. A somewhat similar piece of metal was located well back above the floor of the orbit. The magnet failed to produce any impression on it, so it was left. The discomfort it occasioned soon wore off. It had evidently not been steel.

All eyes containing foreign bodies which had to be removed after failure to bring the foreign bodies forward with the giant magnet proved to contain bodies other than steel. One had a bright little piece of lead in its vitreous. Its lens was cataractous, and another piece of metal had passed right through the eye and out through the macula. The eye had settled down, and was cosmetically a good eye, but had no sight, and caused severe pain in the head, which made the patient ask for its removal.

I have found the giant magnet useful, also, in dealing with steel foreign bodies deeply embedded in the cornea, resting, in fact, on its posterior limiting membrane, or even, indeed, partially piercing this. Such bodies are apt to be forced into the anterior chamber by attempts to remove them in the usual way. But if they are sufficiently loosened and then the pit in which they lie is brought in contact with the giant magnet's point, safe and simple extraction is effected.

In the case of larger foreign bodies, great care has to be taken if a giant magnet be used, as larger bodies are attracted with such force they are apt to damage the lens and other parts of the eye. With them, not only a rheostat has to be used, but the eye approached to the magnet very gradually. If a large foreign body has entered through the sclerotic, it should be delivered again through the sclerotic wound. If it has entered through the cornea, it has, if large, already caused a traumatic cataract, and there can be no harm in bringing it back by the path it entered.

It is possible that the ring magnet or "internal pole" magnet may possess advantages which are not possessed by the giant magnet. Certainly where it becomes necessary to insert a spatula into the eye it would appear to be better, and to have the advantages of a very powerful hand magnet. Harrison Butler, in a paper in the *British Journal of Ophthalmology* for January last describes its usefulness. It was invented by Professor Mellinger, of Basle. It depends, according to Harrison Butler, on the fact that when an electric current flows round a solenoid, a homogeneous magnetic field is generated, whose greatest saturation lies at the centre of the solenoid axis. The lines of force lie parallel and do not diverge, as in the case of the ordinary magnet. In consequence, the tractive force is great along the central axis at right angles to the plane of the ring. Outside the axis the force rapidly falls off.

The magnet consists of an oval ring, just large enough to admit the patient's head. This is wound with about a mile of insulated copper wire, whose diameter varies according to the voltage of the current at command. The head is placed so that the eye lies in the centre of the solenoid. Rods or spatulæ are approached to or at times into the eye in the centre of the solenoid axis.

In the case of the giant magnet, which consists essentially of a core of soft iron, surrounded by a bobbin of insulated copper wire, the lines of force radiate in all directions, and the power is therefore concentrated at the immediate pole. It rapidly falls off as the distance increases; diminishes, in fact, as the square of the distance.

It is an accepted axiom that the sooner attempts are made to remove foreign bodies of steel from the interior of the eye, the easier will be the removal. Delay is apt to result in their being anchored by exudation.

If a steel foreign body is retained in the eye and located where it is in contact with the fluids of the eye, it is likely gradually to undergo partial solution, and rust will stain the eye. If not in contact with the fluids of the eye, it may not do this. I have observed this discolouration years after a piece of steel has been left in the posterior part of the vitreous or in the retina: and it is what we should expect. A case I had, however, a few years ago, in which a piece of steel was located in a lens, taught me much more on this point.

When I saw the man the foreign body, which proved to be steel, had been in his lens for a year. The lens was opaque, and of a rusty brown colour, not the colour of the well-known brown variety of senile cataract, but the colour that would be imparted to it by rust-stain. I removed the lens whole, with its contained foreign body. It was as hard and held as well together as a ripe senile cataract, and behaved like one. The piece of steel had been small. The lens had not dehisced. The aqueous had not penetrated the substance of the lens to any extent, and in spite of this the rust-stain had diffused throughout the whole lens. Nevertheless, I refrained from interfering with the lens of one of my Lemnos patients which appeared to contain two minute foreign bodies, possibly of steel. The eye settled down, and possessed $^{6}/_{18}$ of vision. I gave it the benefit of the doubt. If the bodies are not steel, the localized opacity around each of them may not increase. It may not do so, even if they are steel. I warned him of the possibility, and told him to secure advice if a change occurred.

An exhaustive paper on the technique of the Haab and small magnets, by Whiting and Goulden, is published in the *British Journal of Ophthalmology* for January of this year. It is founded on careful observation of a number of cases treated in a military hospital. During July, 1916, in that hospital in France there were 30 cases in which magnetic foreign bodies were removed from within the globe. In one day five such cases were operated on, and more recently 13 in one week.

Reports of Cases.

CLINICAL NOTES ON THE TREATMENT OF SYPHILIS.[1]

By **R. Graham Brown, M.R.C.S., Eng., L.R.C.P., Lond.,**
Brisbane.

My excuse for presenting these notes is that, on reading the account of the discussion of the treatment of syphilis which took place at the last meeting of this Branch (October 5, 1917), and which is reported in the *Journal* of October 27, 1917, I could not but feel that justice had not

[1] Read at a meeting of the Queensland Branch of the British Medical Association on November 2, 1917.

been done to the modern method of treatment. I wish to emphasize, by reading the notes of a few cases, and showing a few photgraphs, that immediate good results can be obtained by using the new arsenical compounds.

Case I.—This is a case of primary chancre of the upper lip. The patient (F.G.E.) is a returned soldier, age 30 years, who had been 12 months in Egypt, and who, when I first saw him on the 6th of August last, had been back in this country 15 months. He returned with a compound fracture of the right forearm. The first photograph shows an extra-genital chancre on the upper lip, atypical in that there are two indurated sores. The typical enlargement of glands is evident. He had also a typical early secondary rash and a sore throat, which latter condition induced him to consult me. The lip condition began to develope 10 to 14 days previous to his visiting me. Up to this time he had had no treatment whatsoever.

Treatment.—Isolation in hospital

August 6, 1917.—The first intra-muscular injection of 0.9 gm. novarseno-benzol "Billon" was given in creo-camph

Fig. I.
Patient, F.G.E. Condition on August 6, 1917.

cream and a solution of novocain, as advised by Harrison, White and Mills (*British Medical Journal*, March 5, 1917).

August 13, 1917.—Second intra-muscular injection of 0.6 gm. of novarseno-benzol was given.

August 19, 1917.—Third intra-muscular injection of 0.6 gm. of novarseno-benzol was given.

The second photographs were taken on August 20, 1917, the day the patient left the hospital. You will notice that the signs are practically non-existent. I considered the patient to be free from spreading infection at this stage.

On August 24, 1917, he was given the first intra-muscular injection of 1 c.cm. of grey oil (= 0.1 gm. Hg.), and on August 31, the second intra-muscular injection of 1 c.cm. of grey oil.

The patient came again in a week's time; and, as he complained of some soreness of the gums and teeth, I gave up treatment for the time being. The blood was examined on the 9th of October, and Dr. Harris, of the Government Laboratory, reported that the response to the Wassermann test was negative.

Case II.—This case was similar to the above. The patient (F.J.A.) was a returned soldier from Egypt. I first saw him on July 2, 1917, when he presented a large sore on the upper lip. He first noticed a "pimple" on the lip four weeks before, and the condition had gradually developed. The glands of the neck and of the sub-maxillary region were very much swollen; he had a sore throat and the usual early secondary rash about the body.

Treatment.—Hospital for isolation.

July 2, 1917.—First intra-muscular injection of 0.2 gm. of galyl.

July 6, 1917.—Second intra-muscular injection of 0.4 gm. of galyl.

July 11, 1917.—Third intra-muscular injection of 0.4 gm. of galyl.

He then left the hospital. These injections were followed by three weekly injections of grey oil. In spite of my warning he stayed away until the 9th of October, when I took

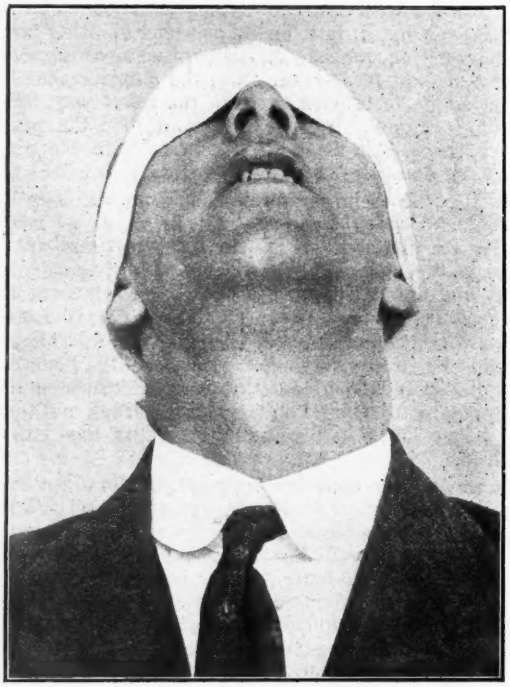

Fig. II.
Patient, F.G.E. Condition on August 20, 1917, after two intra-muscular injections of novarseno-benzol, 1.5 gm. in all.

his blood for examination. Dr. Harris returned the report: "Wassermann reaction—negative." On leaving the hospital this man's condition was similar to that of F.G.E. at the time of his discharge.

Both these patients had frequented the same hotel bar; and I have every reason to believe that they are genuine cases of infection from glasses.

Case III.—This is that of a man (C.G., hotel manager), aged 47 years. He came to me on the 23rd of May, 1917, with an acute iritis of nine days' duration. He had numerous posterior synechiæ (almost ring synechia). He denied having had syphilis or gonorrhœa. On a general examination he presented definite signs of late secondary syphilis. He had a papulo-squamous rash on the legs, arms and body, with *onychia sicca* and peri-onychia of the fingers and toes. He had ulcerating sores on the soles of the feet, which caused much pain on walking. He was in a markedly debilitated condition. Most of the above signs were found out only when the patient was in bed.

Treatment.—Bed for treatment of the eye condition and of the general debility.

April 24, 1917.—First intravenous injection of 0.4 gm. galyl (concentrated).

April 28, 1917.—Second intravenous injection of 0.4 gm. galyl (concentrated).

April 30, 1917.—Left hospital.

These injections were followed by six weekly intramuscular injections of grey oil (1 c.cm.); then signs of mercurialism developed. In spite of warning concerning the dangers of leaving off treatment, this man remained away until the 15th of October, when he returned, presenting an eczematous condition of the back of the hands. I sent him to Dr. Sidney Page for a blood test and treatment. Dr. Page reported: "Wassermann reaction very faintly positive. I should have considered it negative had I not known the history."

The following are the details of the progress of the case. The usual energetic treatment of the eye condition was carried out (which included the use of atropine, artificial leeching, hot bathing, purging, aspirin and pad, etc.); and on the following day all but one synechia was broken down. The eye rapidly cleared, and was quite white by the 29th of May. Eventually, after the action of the atropine had subsided, the remaining synechia was broken down by the alternate use of eserine and homatropine. Vision with correction became $^6/_6$. His skin lesions showed the same rapidity in clearing. My notes show that on the 31st of May, the ulcers of the feet had healed, and the onychia and peri-onychia were also rapidly clearing up.

Case IV.—This occurred in a well-developed boy (T.J.B.) of 17 years. I first saw him on the 11th of September last; he then had had trouble with his right eye for 14 days. He presented an early condition of interstitial keratitis. A faint infiltration involved the centre and lower half of the cornea, and there was a slight degree of vascularization. He had no stigma whatsoever of inherited syphilis and there was no history of acquired disease. The usual treatment was adopted, including the local inunction of mercurial cream around the orbit and iodides by the mouth. In the meantime the blood was sent for examination. The report was returned by Dr. Harris as "very strongly positive." The condition advanced under the above treatment until there were definite salmon patches and the infiltration became much more marked.

Treatment.

September 24, 1917.—First intra-muscular injection of 0.45 gm. novarseno-benzol.

September 26, 1917.—Second intra-muscular injection of 0.45 gm. novarseno-benzol.

September 28, 1917.—Third intra-muscular injection of 0.45 gm. novarseno-benzol.

The eye, after the first injection rapidly quietened down. He has still some opacity, which is gradually clearing. The mercurial treatment is being persevered with.[2]

There has been, and still is, a controversy as to whether the arsenical compounds have a better effect upon most of the manifestations of congenital syphilis, especially in interstitial keratitis, than mercury.

This case illustrates that, in some of the cases at least, if given at the proper time, *i.e.*, when there is vascularization of the cornea, the results are good. I have given salvarsan and the other arsenical preparations in a number of cases of this kind, but have had really good results only in those cases when the drug was administered during the stage of definite vascularization. In the above case I feel certain that the treatment carried out prevented, in a large measure, the development of the same condition in the other eye.

In presenting these notes I do not pretend that any one of these patients is cured of syphilis. A repeated testing of the blood is always advised, and prompt treatment again undertaken if there is the slightest return to a positive reaction.

I do hold, however, that, in the matter of clearing lesions, there is a marked advantage in the modern method, and that this, after all, is of the utmost importance, especially in the treatment of the above-mentioned cases, that is, in primary sores and eye lesions.

One could show cases of syphilis of the nose, palate, etc., which have done well under salvarsan treatment; but perhaps there is no need to elaborate further.

[2] The vision now (November 4, 1917) is $^6/_6$.

Members of the profession, I am sure, will agree that there are certain very definite advantages as well as some disadvantages in modern methods. The science of medicine and surgery is ever on the advance, and I do not think that it can reasonably be maintained that the treatment by inunction is all that could be desired.

University Intelligence.

THE UNIVERSITY OF SYDNEY.

A meeting of the Senate of the University of Sydney was held December 3, 1917, at University Chambers, Phillip Street, Sydney.

The date for the election of the University Senate was fixed for Monday, April 15, 1918.

The following degrees were conferred:—

In person—Bachelor of Engineering (in Mechanical and Electrical Engineering): Arthur Rowland Edwards.

In absentia—M.D.: Garnet Reginald Halloran, Ch.M.: Valentine McDowal and Ormond Gillespie Tunks.

Mr. J. H. Hammond, B.A., LL.B., was appointed Acting Lecturer in the Law of Civil Obligations and Crimes.

On the application of Professor David and Professor Pollock further leave was granted for twelve months or such earlier time as they may be relieved from military service.

A letter was received from Mrs. Irwin Smith, enclosing the amount of £76, being the military pay left by her son, Mr. Murray R. Smith, donating it for the foundation of an annual prize in the Department of Engineering in his name. It was resolved that a letter of thanks be forwarded.

A letter was received from the Health Society of New South Wales Congress transmitting the following resolution:—

> That this Congress urge the Government to place a sum on the estimates for the establishment of a Chair of Domestic Science at the University.

A letter was received from the Universities Bureau of the British Empire, acknowledging the receipt of the report of the Professorial Board on the letters of Professor Gilbert Murray, Director of Special Enquiries and Reports and Monsieur Petitudaillis, Inspector-General of Public Instruction in France, on the interchange of teachers and students between British and Foreign Universities of the Empire and other subjects.

A letter was received from the Solicitors' Admission Board, stating that the preliminary examination for articled clerks after January 1, 1920, would be the Matriculation Examination of the University of Sydney in the following subjects and in accordance with the following provisions:—

(1) English.
(2) Mathematics— (*i.*) Arithmetic.
(*ii.*) Algebra.
(*iii.*) Geometry.
(3) Latin, Greek, French or German.
(4) One or more of the following:—
(*a*) One or more of the foregoing languages not already taken.
(*b*) Mechanics.
(*c*) History: (*i.*) English History.
(*ii.*) Modern History.
(*d*) One of the following science subjects:
(*i.*) Physics.
(*ii.*) Chemistry.
(*iii.*) Geology.

Candidates will require to pass at the higher standard in three subjects, one of which must be Latin, Greek, French or German. If Latin be not selected at the higher standard, it must be taken at the lower standard. Candidates will require to pass in Greek, or French, or German at the higher or the lower standard.

On the recommendation of Professor Mackie the following were appointed evening lecturers in education for the year 1918:—

Theory of Education: Mr. T. T. Roberts, M.A., and Mr. R. J. Cameron, B.A.

History of Education: Dr. P. R. Cole. Experimental Education: Mr. B. Muscio, M.A.

Naval and Military.

CASUALTIES.

Four casualty lists have been published since we went to press last week. They include the names of seven officers serving in the Army Medical Corps, Australian Imperial Force. Captain Ernest Albert Guymer, who was previously reported to be ill, has been severely wounded. Captain Oswald Matthews has also been severely wounded. Captain Ronald Maguire Thomson has been wounded (gas) and Major Geoffrey Hampden Vernon and Captain John Arthur Smith have been wounded. Captain Patrick Joseph Francis O'Shea, M.C., has been wounded, but is remaining on duty, and Captain Simon McLennan is ill.

THE HINDER PRIZE IN CLINICAL SURGERY.

At a meeting of subscribers to the Dr. Critchley Hinder Memorial Fund, held at the Royal Prince Alfred Hospital, Sydney, on December 17, 1917, it was resolved to hand over the proceeds of the fund on January 15, 1918, to the Senate of the University of Sydney, for the purpose of establishing a Hinder Prize in Clinical Surgery. The fund will remain open until the date mentioned. Further subscriptions, which should be sent to the Honorary Treasurer, Dr. H. R. G. Poate, or the Honorary Secretary, Dr. H. H. Schlink, will be acknowledged in these columns.

Balance Sheet of the Dr. Critchley Hinder Memorial Fund.

RECEIPTS.

	£	s.	d.
By Various Contributions	205	7	6
„ Interest to June, 1917	25	18	1
	£231	5	7

EXPENDITURE.

	£	s.	d	£	s.	d.
To Printing	1	15	0			
„ Envelopes	0	12	6			
„ Postage	2	8	9			
„ Exchange	0	12	0			
				5	8	3
„ Cash in Hand				225	17	4
				£231	5	7

December 17, 1917.

H. R. G. POATE, Honorary Treasurer.
H. H. SCHLINK, Honorary Secretary.

Subscribers to the Dr. Critchley Hinder Memorial Fund.

	£	s.	d.
Dr. W. H. Read	3	3	0
Dr. E. A. Falkner	5	5	0
Dr. Cecil Purser	5	5	0
Dr. H. M. Anderson	2	2	0
The late W. Odillo Maher	2	2	0
Dr. M. C. Lidwill	3	3	0
Colonel B. J. Newmarch, C.M.G., V.D.	1	1	0
Dr. S. A. Alcorn	1	1	6
Dr. J. Lamrock	5	5	0
Dr. H. R. G. Poate	1	1	0
Dr. Herschel Harris	3	3	0
Dr. J. MacPherson	2	2	0
Dr. T. W. Lipscomb	2	2	0
Dr. W. B. Dight	1	1	0
Dr. C. B. Blackburn	5	5	0
A Subscriber	1	1	0
Dr. H. B. Hetherington	1	1	0
Dr. V. J. McPhee	1	1	0
Dr. A. I. Blue	2	2	0
Dr. W. S. Brown	3	3	0
Dr. H. H. Schlink	1	1	0
Dr. Chisholm Ross	5	5	0
Dr. Andrew Davidson	1	1	0
Dr. F. M. Suckling	1	1	0
Sir T. P. Anderson Stuart	2	2	0
Dr. W. S. Harvison	2	2	0
Dr. R. F. Llewellyn	2	2	0
Dr. W. MacD. Helsham	1	1	0
Dr. James McLeod	1	1	0
Dr. A. L. Kerr	1	1	0
Sir P. S. Jones	3	3	0
Dr. Sinclair Gillies	3	3	0
Dr. J. C. Halliday	1	1	0
Dr. S. A Smith	1	1	0
Dr. F. Brown Craig	1	1	0
Dr. R. W. H. Maffey	2	2	0
Mr. T. R. Watson	1	1	6
Dr. H. E. Lee	5	5	0
Dr. F. M. Blackwood	5	5	0
Dr. R. L. Faithfull	1	1	0
Dr. C. R. Hodgson	2	2	0
Dr. A. J. Corfe	1	1	6
Dr. J. Morton	5	5	0
Dr. H. Lee Garde	2	2	0
Dr. J. J. Holland	2	3	0
Dr. H. R. Hodgkinson	0	11	0
Dr. A. Y. Fullerton	1	1	6
Carried forward	107	16	0
Dr. L. Halse Rogers	1	1	0
Dr. P. E. Walton Smith	1	1	0
Dr. E. B. Fitzpatrick	1	1	0
Dr. Granville Sharp	2	2	0
Dr. Lindsay Dey	1	1	0
Dr. A. Muscio	2	2	0
Dr. Howard Bullock	1	1	0
Dr. L. Davenport Parry	1	1	0
Lieutenant-Colonel J. A. Dick	1	1	0
Dr. F. S. Stuckey	1	1	0
Dr. R. Gordon Craig	2	2	0
Dr. H. Guy Warren	1	1	0
Mr. R. McC. Anderson	1	1	0
Dr. George Allan	1	1	0
Dr. H. T. C. MacCulloch	3	3	0
Dr. St. J. W. Dansey	2	2	0
Dr. G. Hurst	2	2	0
The late J. Froude Flashman	2	2	0
Dr. E. Tudor Jones	1	1	0
Dr. H. O. Lethbridge	1	1	0
Miss Mary Fletcher	3	3	0
Miss Mona and Mr. E. C. Fletcher	21	1	0
Mr. M. E. Fletcher	5	5	0
Dr. J. I. C. Cosh	3	3	0
Dr. Fourness Barrington	3	3	0
Dr. L. Cowlishaw	2	2	6
Dr. Edgar H. Thane	1	1	0
Dr. H. S. Marsh	1	1	0
Messrs. Bruck & Thomson	2	2	0
Mr. R. Spencer Nolan	5	0	0
Dr. F. Graves Bennetts	2	2	0
Dr. E. J. Spark	1	2	0
Dr. C. Huggart	1	1	0
Dr. T. J. Wilson	2	2	0
Dr. A. J. Gibson	1	1	0
Dr. Earle Page	2	2	0
Dr. E. H. Molesworth	2	2	0
Dr. George Harper	5	5	6
"X.Y.Z."	1	1	6
Dr. F. P. Sandes	2	2	0
Dr. C. Norman Paul	1	1	0
	£205	7	6

The Medical Journal of Australia.

SATURDAY, DECEMBER 29, 1917.

The Year's End.

During the last days of the year, friends follow the excellent usage of exchanging greetings and of expressing kindly wishes for the dawning year. The sadness of the dying year, reminiscent of those who have closed their eyes for the last time on earth during the twelve months, is tempered by a hope of gladness and of healthful achievement in the ensuing twelve months. In following this convention at the end of 1917, at the season when the doctrine of peace on earth and goodwill to all men is preached, we have duties to fulfill at once painful and pleasant. We, as part of the great British Empire, are still at war and peace is still far off, farther off, perhaps, than many imagine. The function of the medical profession is to save life and to heal; the true disciple of Aesculapius must have a loathing of war and of its barbarous sacrifice of the best young lives. The year has brought its full complement of our losses. We mourn our brave dead colleagues who have given all in the cause of freedom and justice. It is the proud boast of the scientist that no dangers, no risks and no hardships may deter him from performing his duty to humanity. Those who have laid aside their practices in the Commonwealth and have accepted their duty among the wounded on the battle field, have again established this reputation. Come what may, the medical profession will be true to its principles and will not flinch in the fulfilment of any duty it may be called upon to perform until a lasting peace can be attained, a peace which is not dependent on a *bout de papier*.

As the year closes we greet the living and do honour to the dead. It is not meet that we should permit our mourning to prevent us from concentrating all our energies in fulfilling our functions in life. Progress in medical science is being slowed down by the paralysing effect of war. The overwhelming amount of practical work to be done in the war zone and the unfavourable environment contribute to lessen the progressive march of science. At home, when medical practitioners are working at extra pressure on account of the shortage of men, the opportunities for research and for deliberate endeavours to solve the manifold problems of disease, are necessarily lessened as compared with normal times. But in spite of these disadvantageous circumstances, much excellent work has been accomplished in the year 1917. It is our duty to redouble our efforts in order that still better progress may be achieved in 1918. The medical profession has emancipated itself from the associations of the days when medicine was synonymous with mystery and astrology. But we have still many superstitions to break down, many beliefs to replace by knowledge and many unconscious minor frauds to get rid of. Each practitioner must help to place the practice of medicine securely on the only sound foundation of scientific fact. If we work steadfastly during the year with this end in view, we shall have justified our own existence. We need not even hope that our labours of the year may be crowned with success, for the limitation of our knowledge makes this impossible. But we can hope that by endeavouring to do our duty to humanity, we may advance the science of medicine a step nearer to that ideal. May we prove ourselves useful to those who place their trust in us in the year 1918.

THE TREATMENT OF MALARIA.

About two years ago a conference was held in Sydney with the object of dealing with malarial infections in soldiers returning from New Guinea and other countries where this disease is endemic. A few months later the recommendations of the conference were adopted by the Federal authority. The members of the conference considered, among other things, whether a standard method of treatment should be prescribed for official use. This plan of setting up official instructions to be followed by medical officers in the Army is not limited to Australia. According to an announcement in the *Journal of the Royal Army Medical Corps*, of September, 1917, new instructions were issued to replace those of April of the current year. The new instructions have been based on the experience of a number of specially qualified medical officers, gained in England during a period of five months. The exigencies of war have necessitated many expedients which would be regarded as undesirable for the civil community. Under ordinary circumstances no body of

men would be justified in commanding medical practitioners to follow a hard and fast plan of treatment of any disease. On the other hand the military authority, being responsible for the reduction of wastage among the troops to a minimum, finds itself compelled to ascertain from experts which scheme of treatment is likely to produce the best results and to insist on the application of this scheme of treatment in all cases. A fortnight ago we published an abstract of an article on this subject by the expert workers at the Liverpool School of Tropical Medicine. Two years ago we published a very able article by Drs. Breinl and Priestley, in which they detailed the treatment advocated as the result of their experience at Townsville. From these and other publications it is evident that, while it is easy to obtain satisfactory symptomatic results in mild infections of malaria, it is extremely difficult to insure even a temporary clearing out of the plasmodium from the blood. The recent experience in England revealed that comparatively small doses, such as one or two grammes given daily, sufficed to reduce the fever and the asexual parasites in from two to four days in the majority of cases. Neither large doses, such as 7 grammes a day for several days, nor medium-sized doses, such as two grammes daily for sixty days, effected a complete eradication of the infection, save in a small percentage of cases. It has further been found that the results obtained by the intravenous, intramuscular or oral administration of quinine were not markedly different, and that the choice of salt of quinine was immaterial. When given prophylactically two grammes daily appear to be necessary. This dose can be tolerated by soldiers on full duty in camp without much inconvenience.

The prescribed treatment of manifest malaria in England may be summarized briefly. Every patient is to receive four grammes of quinine in the form of the sulphate, the hydrochloride or the bihydrochloride, each week until at least sixty days have elapsed after the last attack of fever. The method of administration is left to the judgement of the medical officer, as is the spacing of the doses. Thus, one gramme daily may be given on four days in the week, or two grammes on two days, and so on. When a soldier is receiving the treatment out of hospital, he is given a bottle of tablets of 0.3 gramme of quinine in sufficient quantity to last him for the prescribed sixty days, and he is instructed how many tablets he must take each week. The prophylactic treatment consists in the detention of the patient for two days, when the fever is slight and the administration of two grammes on each day of his detention. He is given a dose of 1.25 gramme on the day of his discharge. In severe fever the patient is given two grammes daily while the fever persists and for three days after. If the patient is suffering from malarial anæmia, he is detained for longer periods and is given four grammes each week as long as he is in hospital. After discharge all the patients are required to take four grammes of quinine each week until there has been freedom from fever for at least sixty days. It will be noted that the doses prescribed are smaller than those employed at the Townsville Institute of Tropical Medicine. The patient is given two grammes each day for three or four weeks, then two grammes on each alternate day for two weeks, then 1.25 gramme on each alternate day for another two weeks, and lastly 1.25 gramme twice weekly for at least two months. Thus, in the course of five months he receives 98.75 grammes or approximately 20 grammes a month, while the English regulations prescribe 32 grammes in two months. It has been established that the malaria plasmodium dies when bathed in a solution of quinine having concentration of 1 in 5,000. In order to obtain this concentration of quinine in the blood of a man weighing 70 kilograms, a dose of four grammes must be given directly into the blood stream. It is impossible to obtain this effect by the application of repeated doses of smaller size.

AUSTRALIAN ARMY MEDICAL CORPS COMFORTS FUNDS.

Our thanks are due to three generous contributors to the Australian Army Medical Corps Comforts Fund.

	£	s.	d.
Amount previously acknowledged	115	16	0
Dr. R. B. Duncan (Kyneton, Vic.)	2	2	0
Anonymous	2	2	0
Dr. Arthur W. Gordon (Auburn, N.S.W.)	1	1	0

British Medical Association News.

SCIENTIFIC.

A meeting of the Queensland Branch was held at the B.M.A. Room, Adelaide Street, Brisbane, on November 2, 1917, Dr. W. F. Taylor, the Vice-President, in the chair.

Dr. Taylor welcomed Lieutenant-Colonel J. B. McLean, D.S.O., on his safe return to Queensland.

Dr. M. S. Patterson showed a patient who was suffering from a fluctuating swelling in the right temporal region. The swelling had been present for about two years. It was not painful. At times it enlarged suddenly, and after a short time it decreased in size. There was some pigmentation of the skin of the trunk and face. The patient complained of giddiness.

Dr. Taylor expressed the opinion that the tumour might be a soft sarcoma.

Dr. L. M. McKillop thought that it was a cyst arising from the temporo-mandibular joint, probably a Baker's cyst.

Dr. R. Graham Brown was inclined to regard it as a meningocele or a venous aneurysm. As it was situated above the zygoma, he held that it was probably not a Baker's cyst.

Dr. L. M. McKillop exhibited a specimen of cancer of the lung. The point of interest in his description was centred around the length of time the patient had lived with a malignant tumour of the lung.

He also exhibited an appendix removed from a boy, aged 10 years, and a tongue removed for cancer.

Dr. J. Lockhart Gibson exhibited an eye he had removed from a child aged 12 years. The removal had taken place in the same afternoon, and the eye had been placed in a 3% solution of formaldehyde. The organ had been injured by the unarmed finger of a school companion during play. There was a penetrating wound of the cornea, across the limbus. The iris had been divided, the lens broken up, and the retina entirely detached. The wound was apparently infected. The injury occurred three weeks previously. The wound had healed slowly. The cicatrix was depressed. The anterior chamber had been partially reformed. He had been unable to keep the pupil dilated after a primary dilatation with atropine. There had been no perception of light, and the tension had been greatly diminished. The sac of the detached retina contained some blood-stained fluid. Representing the remains of the vitreous was a rounded, solid,

light yellow mass, about the size of three lenses. This mass was closely adherent to the capsule of the lens. He had formed the opinion that it was either a plastic exudation or a white blood clot. If it were a plastic exudation, Dr. Lockhart Gibson stated that the eye had not been removed a day too soon. He had shown the eye, because of the extreme severity of the injury caused by a little child's finger nail. The patient had come under treatment on the day following the injury. There had been no pain. There was no swelling of the lids, nor any discolouration.

Dr. W. F Taylor showed some photographs taken by Dr. Brown of a patient who had been admitted to "Whattlebrae" with the diagnosis of meningitis. There was proptosis of both eyes, due to thrombosis of the cavernous sinuses. The patient had had middle ear disease on both sides. A post-mortem examination had been made, and pus had been found in all the sinuses of the brain, in both orbits and in the left middle ear.

Dr. R. Graham Brown showed some photographs of primary chancres of the lip, to illustrate the results obtained by treatment with arsenical preparations (see page 535).

Dr. J. Lockhart Gibson read a paper on the use of the giant magnet (see page 533).

Dr. Taylor thanked Dr. Gibson for reciting his experiences. He had had to content himself with a hand magnet at the General Hospital. He had not seen many cases of steel in the eye. He thought that it was difficult at times to determine whether a foreign body was of steel or of some other metal. He hoped that a giant magnet would be installed at the Brisbane Hospital, since the State had made itself responsible for its upkeep.

Dr. Graham Brown congratulated Dr. Gibson on his success in the treatment of the two cases shown by him. He referred to the fact that Dr. Gibson was the possessor of the only giant magnet in Queensland. As far as he knew, there were but few of these instruments in Australia. There were certain points in technique in regard to which he differed from Dr. Gibson. He did not agree that the giant magnet was the best instrument for dealing with magnetic bodies in the anterior chamber. He considered the method of using the hand magnet, as practised in France, to be the best. This method has been described in the *British Journal of Ophthalmology*, of January, 1917, by Whiting and Goulden. A section was made midway between the limbus and the centre of the cornea. A straight keratome was used, the point being directed towards the foreign body. The size of the incision was regulated by the size of the foreign body, and was made by a forward thrust only. The keratome was withdrawn with care, since the whole secret of success depended on the avoidance of any loss of aqueous humour. The blunt, oval point of the hand magnet was then applied to the cornea, over the foreign body, and as the latter came to the posterior surface of the cornea, the magnet was gradually drawn round to the site of the corneal section. Slight modifications were necessary in special circumstances. The method enabled the surgeon to avoid damaging the anterior capsule of the lens. If the aqueous escaped before the foreign body was removed, the anterior chamber could be refilled with saline solution, or the operation could be delayed until the anterior chamber had reformed. In regard to foreign bodies in the vitreous, he held the opinion that when there was any doubt as to it being magnetic or not, the magnet should be worked with the object of bringing the foreign body into the anterior chamber by way of the suspensory ligament. Relatively few foreign bodies met with in war surgery were magnetic. It was held to be unjustifiable to make a scleral incision for the purpose of withdrawing a small foreign body in the vitreous with the magnet. In civil practice, provided that the history was definite, he would not hesitate to remove large foreign bodies through a scleral incision. He would prefer to bring smaller foreign bodies into the anterior chamber with the giant magnet, and to remove them thence with a hand magnet.

Dr. Graham Brown held the view that no attempt should be made to remove a foreign body, when there was doubt as to whether it was situated inside or outside the eyeball, until an accurate localization had been worked out. He regarded Mackenzie Davidson's method as the only reliable one. As it was rare to get the same result in localization from two radiologists, he held that it was wise to watch the personal element in the operator. Before the war, ophthalmic surgeons invariably advised patients to have a foreign body removed when the reaction in the eye had subsided. During the course of the war they had made the experience that an eye containing a foreign body frequently remained quiet and useful, and, at times, possessed a full vision. He was unable to say whether these favourable results would be permanent, or whether a degeneration and subsequent shrinking of the eyeball would take place after some years. Under war conditions, penetrating wounds of the globe were usually due to high explosive bombs and shells. He laid emphasis on the fact that these foreign bodies were sterilized by the explosion. In addition, they did not pass through any dirty clothing; this had an important bearing on the condition of the wounds. He was inclined to the opinion that this fact accounted for the tolerance of these foreign bodies. In France, all penetrating wounds of the ciliary region, and those which gave rise to prolapse of uveal tissue, were regarded as the most serious of this group of cases. Sympathetic ophthalmia scarcely existed in this war, and he attributed this to the fact of early and expert treatment. In conclusion, Dr. Graham Brown expressed the opinion that the new ring magnet, devised by Mellinger, would prove a more powerful and useful instrument than the giant magnet of Haab.

Dr. A. C. F. Halford congratulated Dr. Lockhart Gibson on possessing a giant magnet, and on having used it so successfully.

Dr. Lockhart Gibson considered that it was better to use the giant magnet for the removal of foreign bodies in the anterior chamber If an incision were made over the foreign body and the hand magnet used, the surgeon ran a risk of touching the anterior capsule. This might result in the formation of cataract. He held the opinion that the incision should be made with a Graefe's knife, and not with a keratome. If the foreiegn body was large and situated in the vitreous, it was not advisable to bring it again into the anterior chamber. Copper was a bad foreign body. Iron was one of the worst to be left in the eye, as it rusted and partly dissolved.

News of Men at the Front

A Medical Officer of the Army Medical Corps, Australian Imperial Force, writing home from "somewhere in France," on October 14, 1917, gives the following information concerning some of his colleagues:—

"The A.M.C. have had a bad time of late. Many officers have been killed and wounded. One, George Elliott, was with me for some weeks on the Somme last year. I can assure you it was like Hades. He and several other officers were taking shelter in a shellhole, when a shell lobbed in the centre of them, blowing them all to atoms. Elliott was one of the pluckiest men I have ever seen. Joe Metcalf, too, is wounded in the knee. His case was a rotten one, too. His brother came over on leave, and whilst crossing slipped on the deck and bruised his knee slightly. A few days later he was admitted to hospital and the knee operated upon. A few days later his leg was amputated through the thigh, and he died next day. His brother Joe was sent for, but being wounded could not come over. Harold knows them. Tom Frizell is seriously wounded, also one of the Furbers, slight, I believe. One M.O. was wounded, since died, and I believe has fair chances for the V.C. There are a good many others, too, put out of action. The bearers, too, have received it in the neck, and the list of killed and wounded among them a long one. Otherwise our casualties have been very light and those of the Hun very heavy."

Public Health.

NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the week ending December 15, 1917:—

	Metropolitan Combined District. Cs.	Dths.	Hunter River Combined District. Cs.	Dths.	Rest of State. Cs.	Dths.	Total. Cs.	Dths.
Enteric Fever	5	0	4	2	14	1	23	3
Scarlatina	11	0	1	0	3	0	15	0
Diphtheria	20	0	5	0	20	1	45	1
C'bro-Spl. Menin.	0	0	1	1	2	0	3	1
*Tuberculosis	14	9	0	0	0	0	14	9

* Notifiable only in the Metropolitan and Hunter River Districts, and, since October 2, 1916, in the Blue Mountain Shire and Katoomba Municipality.

VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending December 16, 1917:—

	Metropolitan. Cs.	Dths.	Rest of State. Cs.	Dths.	Total. Cs.	Dths.
Diphtheria	41	1	15	2	56	3
Scarlatina	23	1	35	0	58	1
Enteric Fever	0	1	2	0	2	1
Pulmonary Tuberculosis	24	6	16	5	40	11
Poliomyelitis	3	—	0	—	3	—

QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending December 15, 1917:—

Disease.	No. of Cases.
Diphtheria	26
Scarlatina	7
Enteric Fever	15
Pulmonary Tuberculosis	6
Erysipelas	2
Ankylostomiasis	1
Cerebro-spinal Meningitis	1

SOUTH AUSTRALIA.

The following notifications have been received by the Central Board of Health, Adelaide, during the week ending December 1, 1917:—

	Adelaide. Cs.	Dths.	Rest of State. Cs.	Dths.	Totals. Cs.	Dths.
Diphtheria	1	2	19	1	20	3
Pulmonary Tuberculosis	1	3	18	2	19	5
Scarlatina	1	0	3	0	4	0
Enteric Fever	0	0	3	0	3	0
Erysipelas	0	0	2	0	2	0
Pertussis	0	0	2	0	2	0

TASMANIA.

The following notifications have been received by the Department of Public Health, Tasmania, during the week ending December 15, 1917:—

Disease.	Hobart. Cases.	Launceston. Cases.	Country. Cases.	Whole State. Cases.
Diphtheria	1	4	11	16
Pul. Tuberculosis	1	0	1	2
Enteric Fever	1	0	0	1
Poliomyelitis	1	0	0	1

WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, during the fortnight ending December 8, 1917:—

	Metropolitan. Cases.	Rest of State. Cases.	Totals. Cases.
Enteric Fever	12	4	16
Diphtheria	12	17	29
Scarlatina	4	7	11
Pulmonary Tuberculosis	12	6	18
Erysipelas	2	0	2
Malaria	1	0	1
Cerebro-spinal Meningitis	1	0	1
Poliomyelitis	0	1	1

Obituary.

THOMAS KINLEY HAMILTON.

During the last forty years South Australia has never lacked a medical practitioner of the name of Hamilton, and quite recently there were five of that patronymic practising in Adelaide or its suburbs. Of these, four were sons of the late Reverend R. Hamilton, M.A., sometime Vicar of various parishes in the counties of Armagh and Tyrone, and the fifth, the late Dr. Archibald A. Hamilton, though not related to the others, was actually at the same school as Thomas Kinley Hamilton. With so many of the same clan, it was inevitable that Christian names, or their initials, would come to be employed to distinguish one from another, and hence both to the majority of its colleagues and to the lay public he was better known as "T. K." Hamilton, or more familiarly as "T. K." He was born at Castlecaulfield, Co. Tyrone, on January 6, 1853 so that he was within a month of attaining his 64th birthday. He was the eldest son of a family of thirteen, and his death has created the first gap in their ranks. His education was commenced at the Royal School in the small neighbouring town of Dungannon, and was continued at the Dundalk Grammar School, when his father became Vicar of this important town. In due time he was entered at Trinity College, Dublin, where he took up the B.A. and the M.B. courses of study simultaneously. Here he made such good use of the material and the teaching afforded by the Royal College of Surgeons, and the Adelaide Hospital, Dublin, that, but for a breakdown just before the time of his final examination, he would undoubtedly have been the man of his year—1876—carrying off as he did all the clinical prizes in medicine, surgery and gynæcology, and the special prize founded by Dr. S. T. Knaggs, of Sydney, at the Adelaide Hospital. In the same year, and on the same occasion, one other brother (better known as J.A.G. or "Jag" Hamilton) took his degrees, one whose stalwart physique and robust appearance were in striking contrast to the spare figure of less than medium height, and the somewhat ascetic countenance of "T.K." Soon after he became qualified, having as an undergraduate been a resident medical officer of his hospital, he engaged in practice in the town of Tanderagee. Whilst so employed he did not, however, forget his reading and the result was that in 1879 he took both his M.D. degree and the Fellowship of the Royal College of Surgeons of Ireland. His younger brother had meanwhile emigrated from Ireland and settled at Kapunda, a copper-mining town in South Australia, and in 1880 "T.K." arrived and settled at Laura in a farming district some 140 miles north of Adelaide. Here he attained to a busy practice, spread over a wide area of country, and perhaps only approached in extent and importance by that of his then neighbour at Jamestown (now the Honourable Sir John Cockburn, K.C.M.G.).

At this early stage of his career opportunities for eye work were abundant, and this branch of his practice became so extensive and engrossing that he decided to make it a speciality in conjunction with that of the ear, nose and throat. With this in view he spent considerable time in Europe, studying in London at Moorefields and the Golden Square Throat Hospital, in Dublin under Swanzy, and completing his studies in Berlin under the great masters of the time; he repeated this visit to keep himself in touch with the latest advances in his work a year later. He became a Fellow of the Ophthalmological Society of the United Kingdom in 1889. Immediately after his return, he set up in Adelaide. When he was at the zenith of his reputation some 20 years ago, he had an immense clientèle; his waiting-rooms were crowded with patients, and his evenings were devoted to an enormous correspondence. He started when there was only one specialist in South Australia, and that one a pure ophthalmologist. His success led to several competitors arising, but till quite recently he held his own as the *doyen* of the specialists. His advice was much sought in consultation, and no one ever met him without learning something fresh. He appeared to have a partiality for, and indeed almost a faith in, the latest recommended drugs and methods, but an up-to-date attitude of thought and practice is surely preferable to a rigid conservatism.

For some time he was on the staff of the Adelaide Hospital, but unfortunately room was never found for him, as it might well have been, in the list of Lecturers of the Faculty of Medicine in the University. He also held several minor posts in connexion with charities for the blind. Thomas Kinley Hamilton was long connected with the British Medical Association, which he joined before he left the old country. On his arrival he was transferred to the South Australian Branch in March, 1881, and although living so far from the metropolis, he soon made his existence known by a series of papers on various subjects, which gave evidence of wide reading combined with great accuracy of note-taking and boldness in such surgical undertakings as at that time were still thought to be almost the exclusive prerogative of hospital surgeons. When he took up his residence in Adelaide he became a constant attendant at the meetings of the Branch, a frequent exhibitor of cases, and a contributor of many learned articles on his special subjects. In 1895-6 he served at President of the Branch. But his reputation was not confined to the one State. At the Intercolonial Medical Congress of Australasia held at Brisbane in 1899, he was a Vice-President of the Section of Eye, Ear and Throat, and in 1902 its President at Hobart. On both of these occasions he won the high respect of his colleagues. Of late years, owing to his increasing deafness, and the fact of his living out of town, he was less frequently seen at the meetings of the South Australian Branch. In 1889 he became a member of the South Australian Medical Board, and in 1899 he was elected President, an office which he resigned in the year 1912. For some years he was a director of the Australian Mutual Provident Society in Adelaide, but he sought no public positions, nor municipal nor Parliamentary honours. In manner he was kindly and genial and at times humorous.

As became an Irishman, he was a lover of horses, and horse riding was at one time his recreation. He even took up horse-breeding, but probably he would hardly have recommended it to his brother practitioners as a hobby from the point of view of financial success. Later he was known as a breeder of fancy varieties of dogs and cats and as a judge at the exhibitions of these animals.

There was another side to his character to which allusion should be made. Born in the Manse, he had deep religious convictions, coupled, however, with a broad-minded tolerance for those who were connected with other denominations, or even not outwardly connected with any. In the Anglican Church he was a veritable pillar, synodsman, lay reader, and churchwarden, a successful organizer of mission funds, and a generous subscriber to schemes for erecting churches in whatever parish he lived. "T. K." Hamilton was never very robust, though he was captain of the cricket team at school, but he must have possessed a wiry constitution to stand the enormous journeys he had to travel when in country practice in the north. He seems to have had "typhilitis" as a young man; an attack of, and operation for, gall stones a few years ago did not improve him. An extremely painful and obscure illness of a few weeks' duration was providentially terminated by pneumonia on December 6, 1917. On the following day he was committed to the grave, after a service at his parish church, which was filled with his many friends and patients. The coffin was born in by several of his colleagues, including Professors Stirling and Watson, Drs. Lendon, Marten, Giles and Swift.

Thomas Kenley Hamilton was twice married. Two sons are serving at the front and a daughter resides in England, the wife of the Suffragan Bishop of Lichfield, the Right Reverend Dr. Crauford. Other brothers are Dr. C. W. Hamilton, who has been on war service in England, and Dr. Reginald Hamilton, lately in partnership with "T.K." Another of his many brothers is Vicar of Dundalk, his father's former parish.

Dr. G. A. Fisher writes:—

As assistant to the late Dr. T. K. Hamilton during the two years, 1898-1899, I had favourable opportunities of knowing the doctor.

He had a very kindly disposition, and was strongly united to his work. Though far from well, he seemed to possess inexhaustible energy, and notwithstanding the numbers of well-to-do patients who were needing him, he gave much of his valuable time and his best work to very many who were entirely indigent and unable to pay anything for such services.

He was the first medical man in South Australia to combine the eye, ear, nose and throat for special study, thus establishing a precedent which has since been followed by others.

Whereas he was good in all departments, his strong point was undoubtedly eye surgery. He was conspicuously successful in the treatment of trachoma and its sequelæ, so frequent in parts of South Australia, and in lid operations, and did most excellent work in glaucoma and cataract cases.

He early recognized the relationship between errors of refraction and headache, and certain forms of conjunctivitis, and was thus able to give relief to many.

He was well-informed of the progress in his speciality outside of his State, and was ever ready to try recommended new remedies and new operations.

He insisted on a careful and thorough history of each case, and a correct record of its progress. His numerous case books bear faithful testimony to his thorough methods.

Special Correspondence.

(By Our Special Correspondent.)

CANADA LETTER.

A New Ether.

The description of a new ether given by Dr. James H. Cotton, of Toronto, before the Canadian Medical Association at the annual meeting in June, has aroused the greatest interest in the new product and in the research carried out by Dr. Cotton. The new ether is not yet on the market, but its commercial production is awaited with much interest.

Although experience has shown that the same brand of ether varied in its action, and that different clinical effects were produced by the various brands upon the market, ether has been considered as a definite entity and differences in action have been attributed to impurities. Dr. Cotton, however, has separated commercial anæsthetic ethers into a purely analgesic and a purely narcotic part, which changes the point of view entirely. Dr. Cotton states: "Every anæsthetist has at times mentally criticized the anæsthetic powers of certain cans or makes of ether, and, . . . has laid the blame at the door of the patient. But there is a reason, a most vital reason (other than idiosyncrasy), and that is that ether, ethyl ether, is not an anæsthetic, and the analgesia which comes from the administration of commercial ether is not due to ether, but rather to the impurities ocurring in it."

The research which has been productive of such important results, was begun in the spring of 1915 at the Toronto General Hospital. It was recognized that the derivatives of the chemical part of ether were irritative, anæsthetic, or toxic. The anæsthetic derivatives were divided into narcotics which produce peripheral congestion and drunkenness, and analgesics which produce loss of sensation and peripheral vaso-motor spasm. Absolute di-ethyl ether is a narcotic but does not anæsthetize; if, however, a small amount of carbon dioxide be present, the patient enters the natural anæsthetic and analgesic stages. It was found that this ether, upon being passed through a certain process, developed analgesic properties, and that it was possible by its use to perform major operations without causing pain, although the patient was able to articulate clearly. The symptoms were studied carefully in over one hundred cases and the presence demonstrated of a gas possessing similar properties to those of ethylene (CH_2—CH_2). It was evident that this ethylene developed in the process to which the ether was submitted, as it was not present in the absolute ether base. Accord-

ingly ethylene was manufactured, through the interaction of alcohol and sulphuric acid, and added to absolute ether, with the result that an analgesic product was obtained, similar to the one described above. Traces of ethylene were discovered in every ether on the market, and the anæsthetic powers of these ethers were found to depend upon its concentration.

The work of Dr. Cotton makes it possible to control sensation as well as narcosis, and if ethylene is present in sufficient quantity, to cause the patient to lose all senation before being made drunk by the narcotic solvents. The state of drunkenness which is necessary for a certain grade of analgesia, depends entirely upon the condition of the circulation of the patient.

Analgesic substances, such as carbon dioxide ethylene, and other ether gases, when present in an ether, hasten the occurrence of rapid deep respirations. In experiements conducted along this line, Dr. Cotton was able, by means of rapid breathing, to eliminate sensation three times in succession with one dose of analgesic ether. The tentative theory is, therefore, submitted that ether anæsthesia bears some relation to a certain condition of the peripheral circulation relative to the nerve endings.

The question of post-operative nausea is also touched upon. It is suggested by Dr. Cotton that the condition may possibly be due to the presence of carbon monoxide which is contained in a poisonous gas produced by the super-heating of ether which takes place when the cans are soldered. It is suggested also that this sickness may be due to insufficient quantity of ethylene, which makes it necessary to administer an overdose of narcotics in order to produce analgesia.

Venereal Disease.

A meeting of representatives of a number of provincial organizations was held at Toronto in August, for the purpose of discussing means of checking the spread of venereal disease. It was stated that approximately 1,500 patients suffering from venereal disease had been admitted to the Toronto Military Base Hospital each year, and that during the first three months of this year an examination had revealed the fact that 12% of all the patients in the Toronto General Hospital gave a positive Wassermann reaction. A committee, under the chairmanship of Major J. G. Fitzgerald, C.A.M.C., Director of the Antitoxin Laboratories of the University of Toronto, has been appointed to deal with the question and to organize a campaign of education.

Correspondence.

THE METRIC SYSTEM.

Sir,—I note in the Annual Report of the Council of the Victorian Branch, published in your issue of December 15, 1917, the following paragraph on the Metric System:—

> The Council proposed to the Faculty of Medicine of the University of Melbourne that the metric system of weights and measures should be taught to the exclusion of any other system. A sympathetic reply was received, and it has been arranged that the change shall come into force next year.

It is now a good many months ago that a similar resolution was passed at a meeting of the New South Wales Branch. We have been informed in your columns that the proposal was favourably received. What I would like to know now is how much that means. Reactionaries would intrigue against such a change when they would not brand themselves by coming out openly in opposition, for argument would be unsafe. Underground opposition is much safer, and more likely to attain its object.

The system has been definitely adopted, and is in use, in the Adelaide School. It has been definitely adopted as the exclusive method also in the Melbourne School, and we are told categorically that it has been arranged that the change shall come into force next year, *i.e.*, in 1918.

Now, where does the Sydney School stand? Is it saying that reforms may be all right for Adelaide and Melbourne, but, for Heaven's sake, leave us alone, we prefer the more imperfect to the better, because we don't like change? Or does it falter and palter, hesitating like a little boy before a cold bath, putting in his unwilling and shivering toes, and taking them out again, unable to face the shock?

If the Faculty of Medicine in the Sydney School means to fall into line with Adelaide and Melbourne, surely we should be able to hear something definite about it now. Some of the members, I know, are enthusiastic reformers and have a scientific and progressive spirit. But there are always passive resisters, sometimes active ones, when any innovation, good or otherwise, is proposed. So I ask, where does the Sydney School stand?

Yours, etc.,

C. E. CORLETTE.

December 14, 1917.

THE MENACE OF THE BIRTH-RATE.

Sir,—Professor Berry's address on "The Menace of the Birth-rate" is too startling to be merely read and dismissed from the mind. It cannot fail to produce in every thoughtful reader an intense aggravation of the burden of national anxiety which has become already so heavy and so prolonged as to be almost past bearing. Having read it, we should realize, perhaps for the first time, that the war against the Prussian is not the only war we have on hand; nor is it the greatest, nor the most threatening, nor the most difficult to wage successfully. Let me jot down briefly a few facts about this other war, so that we may look it fair and square in the face.

First, this is "woman's war." This is a fact as absolute as that the actual fighting in Europe is man's "job"; not even the splendid aid and backing that woman gives to him in the waging of it can alter that elementary fact. The first effective step must be to inform woman of what is required of her, and to show how completely she holds in her hands the immediate destiny of the British race.

Were we to be beaten to our knees by the Prussian, we should arise badly damaged, no doubt, but not irrecoverably destroyed; but if woman turns a deaf ear to this great call, and proves half-hearted and nerveless, then, as Professor Berry has shown, the schoolboy of to-day will live to see his erstwhile proud race fallen from leadership, decadent, and shameworthy.

And the remedy? What are we to suggest that woman must do? The answer is clear; but before we can expect her to take effective action, it is for us to make plain to her our great national need, and show that it is within her supreme power to meet it.

She must abandon the "slowing-down" policy which is rapidly bringing ruin to our race. She must make it her first aim in life to have a large family, and not a small one; and we must see to it that if she cannot afford to bring up a large family she shall be systematically helped.

She must recognize that the married woman who prevents the birth of a child, commits a greater sin than the unmarried woman who gives birth to one.

Above all, she must review intelligently and with an open mind the social conventions in which she has been brought up. These must be closely scrutinized in order to ascertain exactly at what points they come into conflict with "child production." She will then distinguish between those laws that are of divine ordinance and those which are of human contrivance; these latter at any rate may legitimately be subjected to revision and modification or even annulment.

Above all, she will have to face seriously and courageously the question of the unmarried woman, a question that was already becoming insistent before the outbreak of war, and which will clamour all the more loudly for an answer in the immediate future for reasons that are all too obvious. She may well ask, is it reasonable that the fulfilment of woman's first and chiefest function, that of motherhood, should be taken entirely from her own control, and should be made to depend upon the mere chance of her finding sufficient favour in the eyes of some man to be asked in marriage? The unfairness and injustice of it is so outrageous as to be absurd; it is amazing that woman should have acquiesced in it so long.

A courageous and sympathetic attempt has been recently made in this country to grapple with this problem; but unfortunately it appears to have been stillborn by reason of a fatal inability on the part of the gentle authoress to shake off the fetters of purely human convention.

It only remains to be added that there is no suggestion nor thought of altering or in any way invading the sanctity of the marriage-rite, or the state of matrimony. The evil lies in the increasingly wide separation that has gradually but rapidly been making itself apparent between the ideals of marriage on the one hand and the state of matrimony on the other; and of this hideous perversion of the most sacred of all human relationships, the married are alone guilty.

This then is "woman's war," and she alone can fight it. We are seeing what marvellous things she can and will do, and to what heights she can rise. But this is her own war, her supreme hour if she will but see it. Let her buckle on her feminine armour and go into it for all she is worth. She has seen what war is, Heaven knows. She has seen husbands, sons and brothers go forth in their thousands to death and maiming, for her protection primarily. No such self-sacrifice can ever be demanded from her; what is demanded is that she should make some sacrifice of personal comfort and convenience for the effective performance of her first duty in life. It does not sound very much to ask, when contrasted with what her menfolk have already given. Yet if she fails us now, the blood and tears that have flowed during the last three years will have been squandered in vain, and it will matter little whether we win this war or lose it.

Yours, etc.,

R. HAMILTON RUSSELL.

Melbourne, December 15, 1917.

THE TOXÆMIAS OF PREGNANCY.

Sir,—One cannot help feeling indebted to Dr. Hamilton for his admirable résumé of our present position in regard to the toxæmias of pregnancy in *The Medical Journal of Australia* of November 24, 1917. His arguments regarding the necessity of prematernity clinics for the poor, and a constant, regular, and systematic supervision of those able to pay, will meet with the approval of every practitioner who has the interests of his patients at heart. One certainly agrees that the time is ripe for the education of the general public on the subject, so that they will know what is the right thing, and be prepared to demand it and pay for it. One whole-heartedly agrees, too, that, although our ideas regarding the pathology of the conditions under the general name of toxæmias of pregnancy are hazy, one cannot but feel that, even with our present knowledge, many, if not all, these cases are preventable. The experimental investigation of the subject is fraught with special difficulties. The pregnant woman is much more prone to these conditions than the lower animals; in fact, the only cases known of any condition analogous to eclampsia in the lower animals are among highly bred dogs, cats, and cows, living apparently under much the same types of conditions as their masters. What then are these conditions that predispose to eclampsia (and with it one can safely take the other toxæmias)? During the last five years I have at various times attempted the experimental investigation of the subject, and have collected the statistics of incidence of and mortality from eclampsia in the principal cities and states of the world, and have attempted to see if there was any correlation with local meteorological conditions. My work, so far, is insufficiently complete to enable me to put it into a connected and complete paper, but I propose here to give the main facts so far adduced, as they may prove of value to other workers. The percentage of cases of eclampsia to total deliveries is 1.8 in Melbourne Women's Hospital, 1.42 in New York hospitals, 2.6 in Cape-Town hospitals, and 1.05 in Delhi (St. Stephen's Hospital). It is 4.1 in New South Wales subsidized hospitals, and 5.2 for whites and 2.2 for coloured in Johns Hopkins Hospital, Baltimore. For all England it is 0.42 (hospital figures not available), for Bombay Hospitals it varies from 0.21 to 0.48, it is 0.28 for Rotunda, Dublin, and 0.24 for New Zealand. The rate in hospitals is, as a rule, double the rate for the whole city or whole state. As a general rule, where these figures are high, the death-rates from eclampsia compared with the number of cases of the condition are low, and where the percentage incidence is low, the mortality is high. I do not think the difference is altogether due to lack of uniformity in diagnostic methods. The attached table illustrates the point, and gives some of the meteorological data. The figures are all for hospitals.

	Incidence % of deliveries.	Mortality % of Cases.	Mean av. Temperature.	Mean Max. Temperature.	Mean Min. Temperature.	Mean rel. humidity.	Total rain.	Prev. Wind.
			Deg. C.	Deg. C.	Deg. C.			
Sydney ..	4.1	15.3	17.2	21.1	13.3	73	48	
Melbourne .	1.84	42.8	14.4	19.4	9.4	71	25	
Baltimore .	5.02	18.18	12.8	30	—2.2	70	43	SE
New York .	1.42	35.4	11.1	27.8	—4.4	73	44	NW
Bombay ..	(A) 0.21	90	26.1	32.8	20	79	74	N
	(B) 0.48	23						
Delhi	1.05	60	25	40.5	8.9	55	28	NW

Influenced by the apparent fact that it is inspissation of the body fluids due either to excessive evaporation or insufficient imbibition of water that predisposes towards these conditions, I fed animals (dogs, rabbits) on a water-poor diet, and after varying periods tested their irritability to apomorphine and to strychnine. Although the results were not very striking—as a general rule the "desiccated" animals responded more readily than controls—it certainly was noteworthy that the experimented animals were more "nervy" and irritable, their hair became dry and fell out in patches, and they became constipated, and in some cases quite ill. The coprostasis that was obviously occurring here, undoubtedly would lead to the absorption of various putrefactive bodies, which have been systematically worked at by Dale, Barger, Dixon and others. In some experiments which I have myself performed on the subject (so far unpublished) I found that an extract of putrefied tissue (liver, spleen, placenta) when injected into an animal had an inhibitory effect (after a preliminary stimulation in some cases) on the secretory action of secretin on the pancreas, and on the secretory action of pilocarpine on the pancreas, salivary glands, lachrymal glands and sweat glands. This would lead to digestive disturbances, leave the gastric, duodenal and jejunal mucosa open to the unrestrained action of any gastric juice formed, and certainly of undigested food (particularly if infected by diseased teeth) lying in these parts. I hope to deal with these facts in a paper on duodenal ulcer at present in preparation. It certainly would account for the "epigastric sensation" and indigestion of some pregnant women. Whether the continued inhibition of salivary secretion would ultimately lead to the setting up of a "paralytic" secretion (such as is obtained experimentally by section of the *chorda tympani* nerve) with consequent persistent dribbling, or whether the derangement of the pancreatic and intestinal secretions would so upset the normal functions of the bowel as to lead to persistent vomiting (reflex?), I can only throw out as suggestions with a view to further work on the subject. The experimental data so far to hand are not sufficient to prove the point conclusively. What relation the fœtus has to the maintenance of the condition cannot for the present be determined, though it is generally accepted that emptying the uterus will, in many cases, lead to the recovery of the patient and cessation of symptoms and signs which indicated imminent dissolution. What indications do the above facts suggest in regard to treatment or prophylaxis? The methods of treatment have been fully dealt with by Dr. Hamilton in his paper, but two facts stand out: (1) The elimination of toxins by internal and external lavage, accompanied by such stimulation of the eliminating organs as is compatible with maternal safety, and (2) the emptying of the uterus, choosing time and method most likely to give the best result for child and mother. As regards prophylaxis, I certainly think one obtains best results by advising the copious imbibition of large quantities of water or dilute watery beverages, and by immediate attention to even the slightest

irregularity in bowel, skin or kidney action, appetite or whatever subjective symptoms may arise. I certainly think one should aim at producing in a patient a urine approximately isotonic with blood, that is with a specific gravity of say 1010, and maintaining it in this condition by appropriate measures—the least drugging the better. I certainly think a great deal of the constipation and vomiting in pregnancy is due to coprostasis, and that they are immediately cured by insisting upon the patient drinking 7 or 8 glasses of water a day, in addition to what she has been accustomed to take. I have found this simple measure efficacious in the majority of cases where the patient is prepared to follow out the directions faithfully. In some cases I give calcium, basing this therapeusis on the fact that calcium has a peculiar inhibiting effect on the activity of bacterial toxins. In this connexion it is interesting to note that Dr. Hamilton finds the oral administration of adrenalin of value in hyperemesis. Is this due to inhibition of absorption of toxins from the gastro-intestine by the action of the adrenalin on the stomach and bowel as I found to be the case with cyanide, strychnine, and aconite poisoning (*Intercol. Med. Journ. of Aust.*, July 20, 1909). Dr. Hamilton's paper is very instructive in many other details, and we can only hope that the improved methods of dealing with women in the pregnant state, which he suggests, and which have long been in the minds of thinking practitioners, will soon become the generally accepted practice.

Yours, etc.,

J. LEON JONA, D.Sc. (Adel.), M.D., B.S. (Melb.).

November 28, 1917.

Books Received.

CATECHISM SERIES PATHOLOGY, Part IV., Second Edition; 1917. Edinburgh: E. & S. Livingstone. Pocket size; pp. 308. Price, 1s. 3d. net.

CATECHISM SERIES, SURGERY, Part V., Third Edition, by Captain G. R. Whittaker, R.A.M.C., F.R.C.S., F.R.S.E., etc.; 1917. Edinburgh: E. & S. Livingstone. Pocket size; pp. 380. Price, 1s. 3d. net.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xv.

Commonwealth Serum Laboratories, Biochemist, Senior Bacteriological Technical Assistant, and Bacteriological Technical Assistant.

Department of Public Instruction, New South Wales, Medical Officers, two men and two women, and one medical officer for inspection and ophthalmic work in the country.

Laboratory of Microbiology and Pathology, Brisbane, Micro-biologist and Director.

Newcastle Hospital, Junior Resident Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	Brunswick Medical Institute. Bendigo Medical Institute. Prahran United F.S. Dispensary. Australian Prudential Association Proprietary, Limited. National Provident Association. Life Insurance Company of Australia, Limited. Mutual National Provident Club
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Medical Officers to the Selwyn Hospital, North Queensland. Brisbane United Friendly Society Institute.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	The F.S. Medical Assoc., Incorp., Adelaide. Contract Practice, Appointments at Renmark.
WESTERN AUSTRALIA. (Hon. Sec., Health Department, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United F.S. Dispensary. Canterbury United F.S. Dispensary. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance Association and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Parramatta, Penrith, Auburn and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
TASMANIA. (Hon. Sec., Belrive, Tasmania.)	Medical Officers in all State-aided Hospitals in Tasmania.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, N.Z.

Diary for the Month.

Jan. 8.—N.S.W. Branch, B.M.A., Council (Quarterly).
Jan. 15.—Tas. Branch, B.M.A., Council and Annual Meeting.
Jan. 15.—N.S.W. Branch, B.M.A., Ethics Committee.
Jan. 17.—Vic. Branch, B.M.A., Council.
Jan. 18.—Queensland Branch, B.M.A., Council.
Jan. 22.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Jan. 29.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
Jan. 30.—Vic. Branch, B.M.A., Council.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.

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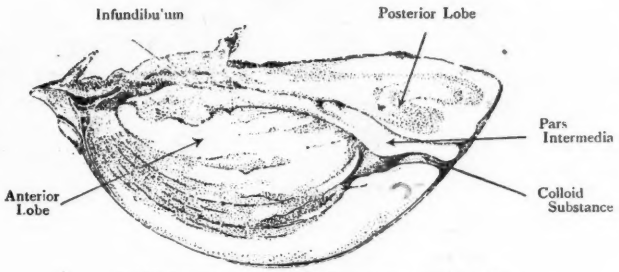

Sagittal section through Pituitary Gland of Ox
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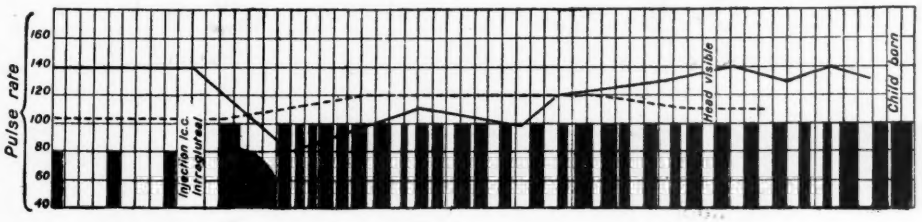
Note details of diagram below.



Vertical lines mark off intervals of one minute
Dotted line _ _ _ _ _ _ _ _ indicates blood-pressure, black line ———— pulse rate
Black columns indicate by their width the duration, and by their height the force, of the uterine pain

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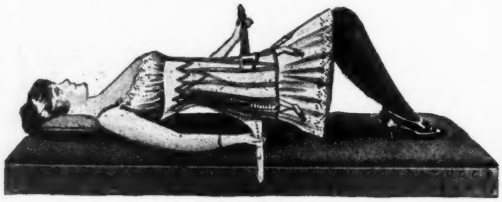

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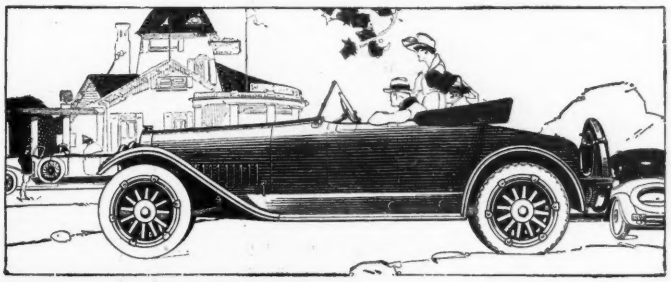

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Index to Advertisements

	Page.
AGENTS—	
Backhouse and Goyder	xv.
R. Barr Brown	xiv
A. Powell	xiv
BANKS, TRUSTEES, ETC.—	
Union Trustee Co. of Australia, Ltd.	xii.
CHEMISTS, ETC.—	
Anglo-French Drug Co., Ltd.	ii.
Burroughs, Wellcome & Co.	ix.
J. L. Chatelain	iii.
Denver Chemical Manufacturing Co.	xvi.
Elliott Bros, Ltd.	xiv.
Felton, Grimwade & Co.	xvii.
J. C. Hallam	xiv.
Muir & Neil	xvi.
Menley & James	xvii.
Parke, Davis & Co.	xviii.
Donald Ross & Co., Ltd.	vii.
CLOTHING—	
Lincoln, Stuart & Co., Pty., Ltd.	iv.
Jenyns Patent Corset Co	x.
Peapes & Co., Ltd.	xi.
DISINFECTANTS—	
Carbolacene	viii.
FOODS, ETC.—	
Benger's Food	iv.
Glaxo	viii.
Horlick's Malted Milk	xvi.
Lactogen	vi.
Nestlé's Milk	v.
N.S.W. Fresh Food & Ice Co., Ltd.	xiii.
MISCELLANEOUS—	
Anthony Hordern & Sons, Ltd.	xiii.
Ingram's, Ltd.	xii.
Lewis Berger & Co.	xiv.
INSTRUMENTS—	
Allen & Hanbury, Ltd.	i.
Denyer Bros.	xv.
Hannam's, Ltd.	x.
J. L. Scott, Ltd.	xiv.
A. Thom	xv.
W. Watson & Sons	vii.
INSURANCE—	
The Insurance Office of Australia, Ltd.	iii.
MOTOR CARS, ETC.—	
F. H. Gordon & Co.	iii.
Garratt's, Ltd.	xvii.
MASSAGE—	
Mr. and Mrs. A. Ollé	xv.
NURSES—	
Australasian Trained Nurses' Association	xv.
SANATORIUMS—	
Sydney Sanitarium, Wahroonga	xi.
WINES—	
Lindeman, Ltd.	xiii.

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Table of Contents.

Page.

ORIGINAL ARTICLES—
Notes on the Use of the Giant Magnet, by J. Lockhart Gibson, M.D. .. 533

REPORTS OF CASES—
Clinical Notes on the Treatment of Syphilis, by R. Graham Brown, M.R.C.S., L.R.C.P. .. 535

UNIVERSITY INTELLIGENCE—
University of Sydney .. 537

NAVAL AND MILITARY .. 537

THE HINDER PRIZE IN CLINICAL SURGERY .. 538

LEADING ARTICLE—
The Year's End .. 539

THE WEEK—
The Treatment of Malaria .. 539

AUSTRALIAN ARMY MEDICAL CORPS COMFORTS FUND .. 540

Page.

BRITISH MEDICAL ASSOCIATION NEWS—
Scientific .. 540

NEWS OF MEN AT THE FRONT .. 541

PUBLIC HEALTH .. 541

OBITUARY—
Thomas Kinley Hamilton .. 542

SPECIAL CORRESPONDENCE—
Canada Letter .. 543

CORRESPONDENCE—
The Metric System .. 544
The Menace of the Birth-rate .. 544
The Toxæmias of Pregnancy .. 545

BOOKS RECEIVED .. 546

MEDICAL APPOINTMENTS VACANT, ETC. .. 546

MEDICAL APPOINTMENTS—IMPORTANT NOTICE 546

DIARY FOR THE MONTH .. 546

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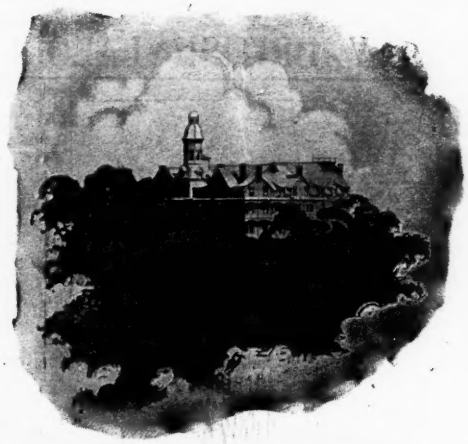

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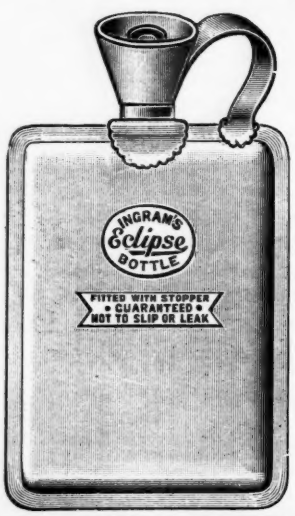

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Applications should be made on a form for the purpose, obtainable at the Office of the Public Service Board, 33-39 Hunter Street, Sydney, or from Clerks of Petty Sessions in country districts, and should reach the undersigned not later than the 7th January, 1918.

By order of the Board,
R. A. GILFILLAN, Secretary.

9a-50)

QUEENSLAND.

Home Secretary's Department,
Brisbane,
14th December, 1917.

APPLICATIONS from qualified Medical Men possessing recent special Laboratory experience in Microbiological research are invited for the Position of MICROBIOLOGIST and DIRECTOR of the Laboratory of Microbiology and Pathology, Brisbane. Applicants must not be over 45 years of age, and applications will be received by the Commissioner of Public Health, South Brisbane, up to the 1st February, 1918. Salary £600 per annum. Further particulars may be obtained on application to the Commissioner of Public Health.

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COMMONWEALTH OF AUSTRALIA.

Department of Trade and Customs,
Melbourne, 13th December, 1917.

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2. SENIOR BACTERIOLOGICAL TECHNICAL ASSISTANT. The successful applicant will be engaged in the preparation of tuberculin, mallein, etc. Preference will be given to individuals with good general bacteriological experience. Special experience in the cultivation of spirochaetes and acid fast organisms will be an additional qualification. Salary, £336, increasing to £408.
3. BACTERIOLOGICAL TECHNICAL ASSISTANT. Applicants should have practical experience (1) of the methods used in the immunizing of horses and (2) handling of antitoxic serum in bulk in the various stages of its preparation. Salary, £216, increasing to £312.

The positions are exempted from the provisions of the Public Service Act.

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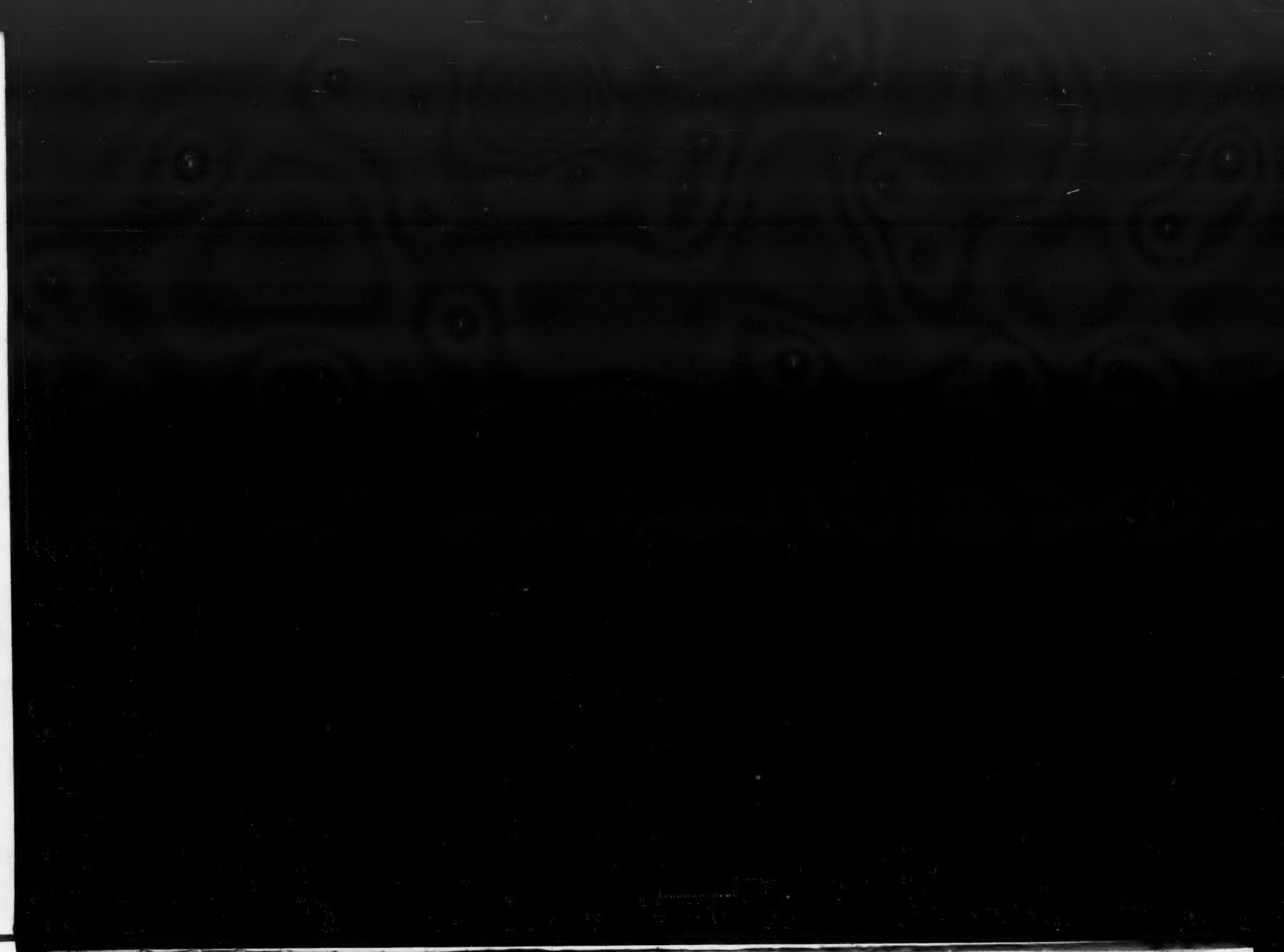
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